

COMPILATION OF RESEARCH  
in  
HEALTH, PHYSICAL EDUCATION, AND RECREATION  
for  
NORTH CAROLINA

1959

Authorized by the North Carolina Association  
for Health, Physical Education, and Recreation  
Prepared by the Research and Measurement Section  
Rosemary McGee, Chairman, 1958-1959  
Research and Measurement Section

This Compilation of Research was authorized by the Executive Committee of the North Carolina Association for Health, Physical Education, and Recreation in 1957 to be an on-going project of the Research and Measurement Section. Research dating from approximately 1950 to 1959 is included in this initial composite. It is the plan of the Research and Measurement Section to prepare an annual supplement. Gene Hooks, chairman of the Section in 1957-58, collected much of the research listing. The present chairman gathered the later topics and alphabetized the listing by author.

The 191 research titles in this collection represent research conducted in various North Carolina schools and colleges as well as research conducted out of the state by persons now located in the state.

The information provided is only as complete and as accurate as it was submitted.

Rosemary McGee, Chairman, 1958-59  
Research and Measurement Section  
N.C.A.H.P.E.R.

## - A -

Adams, Ruby Aretta, "The History and Development of Women's Field Hockey." Master's thesis, UNC.

Allen, E. Marvin, "Effect of Drugs and Water Balance on Performance Under Heat and Exercise Stress." UNC, 1958

The purpose of this study was to determine the effect of caffeine, dexedrine, dehydration, and superhydration on man's capacity to withstand heat and exercise stress as measured by heat gain, heat rate, sweat loss and mental, psychomotor and strength tests.

Arwood, Frank, "The History of the Brigade Boys' Club of Wilmington, North Carolina." Master's thesis, UNC.

## - B -

Barrow, Harold M., "Test of Motor Ability for College Men." 1957.

The purpose was to develop an easily administered test of motor ability for college men.

Becker, Beverly June, "The Construction of Slides to Illustrate Equipment Playing Areas, and Basic Techniques in Selected Recreational Sports." M.Ed., WCUNC, 1954.

Croquet, horseshoes, boccie, pocket billiards, shuffleboard, and table tennis were the recreational sports included. The slides on these sports were constructed (1) for motivation of individuals regardless of their skill level and (2) for instruction in the fundamental techniques of the activities.

Beyer, Beverlyn, "A Comparison of the Effect of Two Courses in Rhythmic Gymnastics on the Physical Fitness Level of College Freshmen Women with Implications for its Inclusion in the Physical Education Curriculum of Secondary Schools and Colleges." M.S., WCUNC, 1959.

Bibza, Olga, "Festival." (Labanotated) to the music "Dances of the Marosek" by Zoltan Kodaly. M.F.A., WCUNC, 1954.

This is a village harvest celebration with different moods of thanksgiving by different types of people.

Biggers, Clyde Wilson, "A Study of the Budgeting and Financing of Interscholastic Athletics in Selected Class AA, A, and B High Schools of North Carolina." Master's thesis, UNC.

Blyth Carl S., "A Study of the Influence of Obesity on the Efficiency of the Body When Subjected to Stress." Twenty First Annual Proceedings, Southern District American Association for Health, Physical Education, and Recreation (April, 1953), 65-68.

\_\_\_\_ (With A. T. Miller). "Estimation of Lean Body Mass and Body Fat from Basal Oxygen Consumption and Creatinine Excretion." Journal of Applied Physiology, V, No. 2 (August, 1952), 73-78.

\_\_\_\_, Carl S., "Influence of Body Type and Body Composition on Capacity for Work and Thermal Regulation." (Office of Naval Research Contract), UNC, 1959.

Influence of physical characteristics, psychological factors and drugs on the capacity of man to work in the heat.

\_\_\_\_ (With A. T. Miller), "Lack of Insulating Effect of Body Fat During Exposure of Internal and External Heat Loads." UNC, 1959.

\_\_\_\_ (With A. T. Miller), "Lean Body Mass as a Metabolic Reference Standard." Journal of Applied Physiology, V, No. 7 (January, 1953), 311-16.

Boatwright, Ann Bacot, "Endless Beginnings." M.F.A., WCUNC, 1959.

This is choreography based on the breath phrase through kinetic motivation.

Bousfield, Elizabeth Ann, "The Status of State Girls' Athletic Association and Comparable Organizations in the Forty-Eight States." M.Ed., WCUNC, 1953.

A questionnaire was used to survey the status of Girls' Athletic Associations in the United States. The results show states which have a state Girls' Athletic Association or comparable organizations, the functions, influences, values and needs of these organizations.

Bowden, Frances, "Song of Phoenix" (Labanotated) to the music "Capicorn Concerto" by Samuel Barber. M.F.A., WCUNC, 1956.

Love between a man and woman from the first romantic love through the trials of good and bad fortune is periodically diminished and eventually strengthened.

Bowman, Louan, "A Suggested Physical Education Professional Curriculum for Women in Small Co-educational Colleges to Meet with the Standards Set Forth in the Jackson Mill's Report," M.Ed., WCUNC, 1958.

Breding, Dorothea Marie, "An Objective Method for Screening the Anterior-Posterior Posture of College Women." M.Ed., WCUNC, 1952.

The purpose of this study was to develop a simple, accurate, and economical method for screening posture. A device based upon the principle of angular measurement was constructed for further experimentation. The results indicated that angular measurement may prove to be as effective as the MacEwan-Howe Method for screening the anterior-posterior posture.

Brooks, Stamey Fitzhe, "The Interrelationship of Selected Factors in a Testing Program for Boys of Grades Five Through Seven in the Lincolnton, North Carolina, Grammar School." Master's thesis, UNC.

Brown, Fred, Carl Wyatt and Paul Hinshaw, "A Study to Determine the Activities which College Freshmen had Participated in During High School." ASTC, 1959.

The study included 260 and 650 freshmen, men and women. Activities which were included in the freshmen's high school program that rated high were: football 216, basketball 256, baseball 250, softball 243, volleyball 215, track 137, square dance 106, table tennis 105, horseshoes 90.

Brown, Julia Mae, "The Construction of Slides to Illustrate Standard Canoeing Techniques." M.Ed., WCUNC, 1953.

The slide series and accompanying manual for the teacher are divided into three parts. Part I covers skills basic to a minimum understanding of paddling. In part II the emphasis is on principles of steering and stroke control. Part III is concerned with solo paddling and is geared for the individual who has mastered bow and stern techniques.

Burgess, William O., "The Relation of Selected Variables with Speed Swimming." Master's thesis, UNC.

Burnett, Tannye Olivia, "The Motion Picture as a Visual Aid in the Training of Officials for Women's Basketball." Master's thesis, UNC.

- C -

Casey, Dorothy, "May Festivals." Master's thesis, UNC.

Cheesman, Mary Jane, "The Relationship of Height to the Performance of College Women in the Repeated Volley Test." M.Ed., WCUNC, 1956.

The wall volley test was administered with restraining lines at three, five, and seven feet. The eighty-eight college

women were divided into tall, short, or medium height groups. the tall group obtained higher mean scores than the short group at all distances, but only the difference at the seven foot restraining line was statistically significant.

Clower, Mary Alice, "A Comparison of College Freshmen Women of High and Low Motor Ability with Regard to Selected Physical and Psychological Capacities." M.Ed., WCUNC, 1958.

Cloyd, Edward L., Jr., "A Study of Girls' Interscholastic Basketball in North Carolina." Master's thesis, UNC.

Coakley, Ann Oldham, "A Comparison of the Physical Education Curriculum for Undergraduate Women Professional Students in Geographically Selected Colleges and Universities in the United States with Special Reference to a Comparative Survey of Directed Teaching Practices." M.Ed., WCUNC, 1955.

Nineteen colleges and twenty-three universities were selected for thorough catalogue study. Curricula were surveyed by catalogue study and practices in directed teaching were determined by a questionnaire.

Collett, Elizabeth Ann, "A Study of Problems Confronting the Camp Counselor." Master's thesis, UNC.

Coman, James Herbert, "A Survey of Physical Education for Boys in the White Secondary Schools of Buncombe County, North Carolina." Master's thesis, UNC.

Conant, Sandry, "Duo for Five" (Labanotated) to the music "String Quartet, Op. 10" by Claude Debussy. M.F.A., WCUNC, 1958.

Cornwell, Oliver K., My Health Book, Chicago: Lyons and Carnahan.

A series of health workbooks for grades four, five, six, seven, and eight. A teacher's manual for each of these grades has also been prepared.

Crary, Phoebe A., "A Study of the Legal Control of Interscholastic Athletics for Girls in the Secondary Schools in the United States." M.Ed., WCUNC, 1955.

Policies toward girls' interscholastic athletics throughout the nation and interpretation of codes and laws were studied. Eligibility, tournament policies, travel regulations, selection of rules, officials and coaches, and standards of conduct were some of the areas considered and compared.

- D -

Dallia, Nancy Lou, "The Construction of Colored Slides to Illustrate Teaching Progressions and Hints for Specific Synchronized Swimming Stunts." M.Ed., WCUNC, 1959.

A 35mm slide series was constructed to show teaching hints and progressions for the ballet leg, submarine, kip, catalina and crane. Each slide has a written description and explanation.

Deakins, Doris Nell, "The Construction of An Educational Bulletin Board and A Series of Instructional Tennis Pictures." M.Ed., WCUNC, 1955.

A series of bulletin boards as visual aids to supplement tennis instruction was developed.

DeGroat, Eric B., "Classification Procedure For Freshmen and Transfers at Appalachian." ASTC, 1960.

A planning for the classification of all entering students at Appalachian into the service program of the Health and Physical Education Department. Through this program there will be groupings set-up to enable the department and the student to participate in activities that will help develop the desire to participate in recreational and non-recreational sports to better appreciate as a participant and as a spectator the values that are inherent within each sport. Also to raise the level of fitness to a maintainable level through carry-over activities as a contribution to living in the community, of the College, and after graduation.

Dinosa, Lolita Pescador, "Philippine Dances Adapted to the Theatre." M.Ed., WCUNC, 1956.

Twelve Philippine dances are included. Each dance has a brief history or explanation, the word description of the movements of the original dance and then the dance as adapted for theatre use. This is followed by the Labanotation of each dance. The music for the dances comes next, then the costume designs and the stage sets.

Ditt, Arthur Harvey, "A Plan for a Health and Physical Education Program for the City School Unit of Marion, North Carolina." Master's thesis, UNC.

Dixon, William Lee, "A Survey of Physical Education for Boys in the District Secondary Schools of Gaston County, North Carolina." Master's thesis, UNC.

Dodson, Taylor, "A Study of the Physical Effects of Basketball on College Players," MA Thesis, UNC, 1948.

Carried a number of boys through two college basketball seasons. Used E. K. G., pulse rate, blood pressure, urine analysis, heart x-ray, Harvard step test, Navy physical fitness test and other measures. Got pre-season, during season, and post-season as well as two month post season figures as means of determining what happens to players under stress of college basketball.

Dodson, Taylor, "Comparative Study of Personality of Restricted and Non-Restricted Physical Education Students."

Using Bernreuter Personality Inventory a class of restricted activity in physical education was compared to an elective games class. Other factors such as the kind and amounts of high school physical education and athletic activities the two groups had experienced was included. Groups were college classes at Indiana University.

\_\_\_\_\_, "History of Physical Education in North Carolina."

Using courses of study, bi-ennial reports of the State Superintendent of Public Instruction, Public School Laws, and the records of the North Carolina Association for Health, Physical Education, and Recreation a brief history of physical education in the schools of North Carolina is given. Published in NCEA Journal.

Drinkwater, Barbara Lee, "The Measurement of Attitude of College Women Toward Physical Education as an Activity Course." M.Ed., WCUNC, 1952.

The purpose of this study was to develop a means of evaluating the attitude of college women toward physical education as an activity course. As a result of the study two objective, valid, and reliable forms of an attitude inventory, devised according to the Likert method, are available.

Droste, Mildred Anne, "The Construction of Slides and a Motion Picture to Illustrate Teaching Aids in Group Golf Instruction." M.Ed., WCUNC, 1954.

The forty-five slides show grip, stance, and common errors in grip, stance, and swing. The slides also illustrate exercises which the instructor may use to aid her students to develop kinesthetic awareness of body responses to a golf swing. The motion picture illustrates efficiency of movement from one formation to another without sacrifice of safety factors and also illustrates exercises to assist students in developing the proper swing.

Duncan, Margaret Calvert, "The Interests and Needs of Older Girls as Influencing Factors in the Development of Camp Program." M.Ed., WCUNC, 1957.

A questionnaire was sent to campers to obtain suggestions for developing an interesting program of activities for campers who are older both in years and in experience at camp. With this information, the camp administrator can serve the camper who seeks stimulation and excitement of the new, yet clings to traditions and to the pleasures of the old.



Earey, Patrick Francis, "An Individual Physical Education Program: Its Justification and Administration." Master's thesis, UNC.

Edwards, Jennings Bryan, Jr., "The Effect of Semi-Starvation and Dehydration on Strength and Endurance with Reference to College Wrestling." Master's thesis, UNC.

Eudy, Joseph Daniel, "The Development of Film Loops of Selected Motor Skills for the In-service Training of Elementary School Teachers." Master's thesis, UNC.

- F -

Falloon, Marion, "The Covetous Sister" (Filmed) to the music "Mazurkas" by Alexandre Tansman. M.F.A., WCUNC, 1951.

The oldest sister is jealous of the love of the middle sister for the youngest, and is jealous of the youngest sister who has inherited the most valued portion of their parents' estate. This jealousy culminates in a trial contesting the will which the youngest wins.

Fink, Mrs. Ruth White, "Physical Education and Educational Television." UNC, 1959.

A study undertaken with research grant from University Faculty Research Council to study the effectiveness of a school related program on physical education via television.

\_\_\_\_\_, "Recreational Pursuits in the Old South." UNC.

A historical study of the games, sports, and pastimes of the white residents of the area popularly termed "The Old South," from the founding of Jamestown to the Civil War period. Diaries, reminiscences, letters, and other original sources were used in the study.

Ford, Carol, "A Comparison of the Relative Effectiveness Between Two Methods of Teaching the Whip Kick to College Women Enrolled in Beginning Swimming Classes." M.Ed., WCUNC, 1958.

Fortenberry, Helen, "An Investigation of the Types and Forms of Dance Existing from 476 to 1500." M.Ed., WCUNC, 1955.

This paper purposes to investigate the characteristics of the pre-classic dances and any earlier dances in an attempt to connect the dance forms of the two periods. Additional investigation on the type of culture in which the dance occurred, when, where, and by whom the dances were performed dance accessories and music supplement the information.

Fowler, Joyce D., "The Value of the Slow-Motion Picture as an Instructional Aid in the Teaching of Tennis Skills." Master's thesis, UNC.

Freeman, Mia Christine, "A Study to Determine Some Characteristics of Dancers." M.Ed., WCUNC, 1954.

This study purposes to determine if there is a difference in the personality traits of dancers and non-dancers. The Bernreuter Personality Inventory and the Rorschach Test were selected for use. The three groups compared were composed of dancers, physical education majors, and girls who were neither dancers nor majors. The dancers were more introverted and more emotionally unstable than either the majors or the non-majors and non-dancers. The dancers have greater adaptive imaginations and tend to be more perceptive of form than non-dancers.

Friedler, Betty, "A Pre-Camp Training Program for Counselors in Private Camps for Girls." M.Ed., WCUNC, 1955.

Information compiled from a questionnaire is used to outline a pre-camp training program for counselors which would supplement present training programs and serve as a guide for initiating such programs.

- G -

Galloway, June P., "An Exploration of the Effectiveness of Physical Education Experiences in the Development of Attitudes of College Women Toward Sociological, Psychological and Spiritual Values as Related to These Experiences." M.Ed., WCUNC, 1959.

The purpose of this study was to develop an attitude inventory to measure the attitude of college women toward selected sociological, psychological and spiritual values closely related to physical education experiences. It was also the purpose to use this inventory to explore the effectiveness of physical education experiences in the development of these attitudes. The attitude scale was constructed according to the Thurstone and Likert techniques with Wang's criteria serving as a basis for selection of attitude statements.

Gamble, Clara L., "A Comparative Study of Smokers, Moderate Smokers, and Non-Smokers Among Women in Required Physical Education at the University of North Carolina." Master's thesis, UNC.

Gaumer, Diane, "We Are the Dreamers" (Labanotated) to the music "Time Out for a Dream" by Freada Miller. M.F.A., WCUNC, 1954.

For a moment we get a glimpse of the inner feelings of members of the typical office which has stenographers and clerical workers of various ages and backgrounds. Then they return to the outer appearance of every day office life.

Gavett, Elizabeth, "A Love Dream" (Labanotated) to the music "Suite Dans Le Style Ancien" by Alexandre Tansman. M.F.A. WCUNC, 1951.

This is the story of Psyche, Venus and Cupid.

Gillespie, Normagene, "A Course for Elementary Teachers Who Will Be Taking Their Students Into School Camping." M.Ed., WCUNC, 1954.

This course was designed to assist teachers who must make the transition from a school situation to a school camp situation. The course was constructed after studying programs already in existence and needs of teachers entering a school camping experience. The organization and administration and the curriculum are included in the plan.

Godwin, Betty Alice, "A Study of the Use of Dance as a Therapeutic Aid, with Special Reference to the Mentally Ill." Master's thesis, UNC.

Gorton, Arlene Elizabeth, "The Development of Hallball as a Team Sport." M.Ed., WCUNC, 1954.

The team sport of hallball is offered to two physical education classes. With their help the game evolves with rules, techniques, strategy, and officiating techniques developed.

Gowitzke, Barbara Anne, "A Comparative Study of the Effects of Varying Time Sequences of Scottish Country Dancing on Selected Components of Physical and Motor Fitness of College Women." M.Ed., WCUNC, 1959.

The purpose of this study was to determine the effect that different time sequences of Scottish Country Dancing, within a four-week period, have on selected aspects of physical fitness--cardio-vascular endurance, balance, leg power, and flexibility.

Grande, Pauline Marie, "The Effect of an Increase in Strength of the Shoulder Girdle of College Women on the Softball Throw for Distance." M.Ed., WCUNC, 1956.

An exercise program for increasing strength in the shoulder girdle was followed by forty physical education majors. These subjects were able to obtain a significant increase in their ability to throw the softball for distance.

Greensboro Public Schools, "Experimental Testing Project, Physical Education, Grades 3, 4, 5, 6." 1958.

Guilton, John Henry, "A Study of the Programs and Facilities for Selected Interscholastic Minor Sports in the Class AAA High Schools of North Carolina." Master's thesis, UNC.

Gunter, Martha B., "The Relation of Physical Education to Social and Emotional Adjustment Problems in the Junior High School." Master's thesis, UNC.

Gupton, Oscar Wilmont, "Personality Characteristics in College Wrestlers." Master's thesis, UNC.

Gutchow, Monica, "Wayfaring Travelers" (Labanotated) to the music "Symphonic Metamorphoses" by Paul Hindemith. M.F.A., WCUNC, 1957.

A contemporary portrayal of the Canterbury Tales with career girls, the scholar, husbands, a nun and two novices and the Woman of Bath.

- H -

Hall, Barbara Ann, "The Establishment of Norms and Standards in Badminton, Basketball, Speedball, and Volleyball for High School Girls in North Carolina." M.Ed., WCUNC, 1953.

Harris, Dorothy Virginia, "A Comparison of Physical Performance and Psychological Traits of College Women with High and Low Fitness Indices." M.Ed., WCUNC, 1958.

The Scott Fitness Battery was used to determine the high and low groups. Physical traits such as flexibility, gross motor performance, fine motor coordinations, and steadiness were compared. The Edwards Personal Preference Schedule and Taylor's Manifest Anxiety Scale were used to make psychological comparisons between the two groups.

Harris, Dorothy V., and June P. Galloway, "The Relationship of Stress Threshold and Physical Fitness." WCUNC, 1959.

A study to see if the physical fitness state (as determined by Scott's Fitness Battery) of an individual is related to the stress evidenced in learning a new skill. Scores are recorded for vital capacity, blood pressure, pulse rate, steadiness and white blood count.

Hayworth, Lewis Clifton, "A Study of the Freshman Physical Education Program for Men at the University of North Carolina for 1946-47 on the Basis of Cozens' General Athletic Ability Test." Master's thesis, UNC.

Hedgepeth, Julia, "Dance 5 and 4" (Labanotated) to the music "Contrasts for Piano, Violin, and Clarinet" by Bela Bartok. M.F.A., WCUNC, 1956.

A dance based on the arabic numerals five and four, and their components, for linear, space and floor patterns, and rhythm patterns.

Hein, Marilyn, "A Comparison of Certain Personality Traits of College Women to Selection of Activities for Physical Education Instruction." M.Ed., WCUNC, 1955.

The purpose of this study is to determine if girls choosing similar types of activities for physical education instruction tend to possess certain similarities in personality traits. The Bernreuter Personality Inventory was used.

Hennis, Gail Murl, "The Construction Knowledge Tests in Selected Physical Education Activities for College Women." Ph.D., State University of Iowa, 1955.

Hennis, Gail M. and Celeste Ulrich, "Study of Psychic Stress in Freshman College Women." WCUNC, 1958.

Hertz, Gilman, "The Effectiveness of Three Methods of Instruction in One-hand Foul Shooting." Thesis.

The purpose of this study was to determine the effectiveness of an overt practice method, an overt practice-implicit learning method, and a kinesiological method in learning to shoot free throws in basketball.

Hisey, Carol Nan, "A Comparison of Selected Physical Performance and Emotional Characteristics of Two Groups of Former High School Athletes in Girls' Basketball." M.Ed., WCUNC, 1958.

Endurance, flexibility, reaction time, coordination, speed, and personality traits were the factors compared. One group numbered fifteen and the other group numbered fourteen. All of the girls had played high school interscholastic basketball for four years but in one group all of the girls had been selected for district basketball teams in addition.

Hoepner, Barbara, "A Comparison of the Effects of a Prescribed Exercise of A Sport On Selected Functional Muscular Weaknesses in Freshmen College Women." M.S., WCUNC, 1959.

Hohenberger, Elaine Mae, "A Study of the Relationship of Motor Ability, Personality, and Adjustment to the Sociometric Status of Women Physical Education Majors." M.Ed., WCUNC, 1954.

A sociometric test designed by the writer was used in conjunction with the Bell Adjustment Inventory and the Bernreuter Personality Inventory to study sophomore, junior, and senior major students.

Hoffman, Earl Edward, "An Exploratory Study on the Competitive Traits in Athletes." Master's thesis, UNC.

Hooks, G. E., "Prediction of Baseball Ability Through an Analysis of Selected Measures of Structure and Strength.

Hoover, Francis, "A History of the National Association of Intercollegiate Athletics." Doctoral Dissertation.

Documentation of the history and progress of the NCIA since its beginning to the year 1958.

Hulac, Georgia Mae, "A Backboard Service Test for Tennis." M. Ed., WCUNC, 1958.

Hult, Joan Selma, "The Comparative Relationship of Leg Strength and Hip Flexibility to Jumping Skill for College Women of Low and High Motor Ability." M. Ed., WCUNC, 1958.

Performance on the vertical jump, the standing broad jump, flexibility of the right hip, flexibility of the left hip, and leg strength were recorded for thirty-three college women with low motor ability and thirty-eight college women with high motor ability.

- J -

Jacobs, Helene, "The Effect of Grip Strength as Related to Distance in the Golf Drive." M. Ed., WCUNC, 1952.

The purpose of the study was to determine if there was any relationship between increased grip strength and the distance of the golf drive. At the conclusion of this experiment no significant increases in grip strength were found. It was impossible to conclude on the basis of this study whether increased grip strength is related to increased driving distance.

Johnston, Jill, "Cyclic Journey" (Labanotated) to music written for this dance by Louise Erickson. WCUNC, 1954.

The basis of this dance is the Platonic notion of the dual nature of man. This exhibits itself in the rise and fall of a man or society in the fluctuations between the powerful urge toward good and the fascination of evil. The cycle is the rise to fall to rise.

- K -

Katzman, Leanora, "The Construction of a Series of Slides for Beginners in Foil Fencing." M.Ed., WCUNC, 1954.

A series of forty-four slides was constructed to assist the beginning fencer in developing a clearer concept of the basic movements utilized in the sport.

Kemp, Jo Ann, "The Construction of a Series of 35mm Slides to Aid in the Teaching of Beginning Horseback Riding Skills." M.Ed., WCUNC, 1958.

Kindig, Louise E., "The Production of a Film to Aid in the Instruction of Basketball Officiating for Women," M.Ed., WCUNC, 1953.

As a result of this study a silent film planned to aid in the instruction of basketball officiating was produced. Film content was based upon opinions of fifty-five women officials who hold national or honorary ratings.

King, Shirley, "A Study of the Effects of Relaxation on Stress in College Women." M.Ed., WCUNC, 1958.

Knight, James William, "A Statistical Study of the Academic Marks of Football and Non-Football Players at Reidsville High School." Master's thesis, UNC.

Koestner, Geraldine Mae, "Educational Television as Related to Physical Education Instruction." Master's thesis, UNC.

Kucyk, William James, "A Study of the Design and Use of Administrative Forms in the Administration of College Intramural Activities." Master's thesis, UNC.

- L -

Lefko, Nicholas Eric, "A Survey of Physical Education for Men in the Junior Colleges of North Carolina." Master's thesis, UNC.

Levin, Helen Mamber, "Interpretation: Times Square at Night" (Labanotated) to the music "Chromatics, Tone Clusters, Polytenality" by Wallingford Riegger. M.F.A., WCUNC, 1955.

Based on a painting by Gregory Ivy, the dance uses the rhythm and holiday moods of typical people of the city pavement contrasted with the brooding waiting quality of nature ever ready to take over the trappings of civilization.

Little, Araminta, "People-Bound" (Labanotated) M.F.A., WCUNC, 1959.

This dance concerns the individual against the masses.

Lloyd, Jane Marie, "A Study of Women's Extramural Sports, With Special Reference to the Women's Collegiate Golf Tournament." M.A. thesis, UNC, 1959.

An analysis of the data pertaining to the WCGT, and to other extramural sports for women, with implications for further study.

Dovingood, Billy W., "An Experimental Study of Simple Reaction Time When Exposed to Heat and Exercise Stress." UNC, 1959.

Fifteen subjects were tested for change in simple reaction time. The subjects were tested before, periodically during, and after a three hour exposure period to heat and exercise stress. Stress was provided by a heat chamber equipped with a motor driven treadmill. Variables were superhydration, caffeine stimulation, benzedrine stimulation, placebo, and dehydration.

Lundegren, Herberta Marie, "A Measurement of Motor Ability for Fourth, Fifth, and Sixth Grade Boys and Girls." M.Ed., WCUNC, 1956.

The purpose of this study was to administer a series of tests, each purported to measure some phase of motor ability, to a selected group of fourth, fifth, and sixth grade boys and girls. Test scores were studied to determine specificity of difference between each grade for each sex.

- M -

Mallory, James Baugh, "A Study to Determine the Validity of Football Achievement Tests as a Partial Basis for the Selection of Players." Master's thesis, UNC.

Malone, Sarah J., "The General Knowledge of Dance of Twelfth Grade Girls in Selected Public Schools of North Carolina." M.Ed., WCUNC, 1955.

A questionnaire survey was made of twelfth grade girls in nineteen North Carolina high schools. Eight hundred and fifty-four girls responded. They answered in light of their knowledge about all types of dance, dance personalities, dance terminology, and opportunities for dance experience.

Marks, Babette, "The Teaching of Softball Rules Through the Use of the 35 mm. Color Slide." M.Ed., WCUNC, 1956.

A series of sixty-six color slides was produced which may be used as an aid in teaching the rules of softball. The slides were planned to serve multiple purposes, not only rules instruction, but also officiating situations, coaching skills, and defensive and offensive play.

Martus, Theodor Charles, "The History of Varsity Track and Field at The University of North Carolina." Master's thesis, UNC.

Mason, Marilyn, "The Comparison of College Freshmen Women with High and Low Scores on the Scott Motor Ability Test." M.Ed., WCUNC, 1954.



This study compared freshmen college women of high and low motor ability with regard to: previous experience in physical education from elementary school until college; psychological and English entrance examinations to college; attitude toward physical education as an activity course; elected college major; physical education grades in college.

Massey, Sally Ross, "A Study of the Stress Relationships Among and Within Individuals with Regard to Metabolic Rate and Cardiorespiratory Change." M.Ed., WCUNC, 1957.

This study indicated that both physical and psychoic stressors elicit a physiological response on the part of individuals. The evidence, supported by statistical significance, is that metabolic rate is changed by physical and psychic stressors, with accompanying cardiorespiratory adjustment.

Matthews, Jane, "An Experimental Investigation of the Effects of Modern Dance Techniques on the General Motor Ability of a Group of College Women at Appalachian State Teachers College." ASTC, 1958.

The experiment with thirty women tended to prove that the training involved in modern dance with emphasis on technique favorably affects general motor ability.

McCormic, Mary Thompson, "The Development of the Individual Problem-Solving Technique as a Method of Presenting Personal Hygiene to College Women." Master's thesis, UNC.

McGee, Rosemary, "Comparison of Attitudes Toward Intensive Competition for High School Girls." Ph.D., State University of Iowa, 1954.

\_\_\_\_\_, "Pilot Study of Five Proposed Physical Fitness Tests for Use in North Carolina." WCUNC, 1959.

Five physical fitness tests were administered to some fourth, seventh, and ninth grade boys and girls. These data helped to detect weaknesses in the test descriptions and test administrative procedures before the tests were recommended for more extensive use to establish state-wide norms.

McLemore, Rosemary, "A Study of the Methods Used for the Selection of Members in Synchronized Swimming Clubs in Colleges and Universities as a Basis for a Proposed Method for the Selection of Members." M.Ed., WCUNC, 1958.

The results of a questionnaire answered by fifty-four schools are summarized for try-out procedures, skill requirements, endurance requirements, judging practices, and final methods of member selection. The proposed method is based on the questionnaire results and on personal experience in an effort to simplify the procedure without losing the validity in making the final selection.

Mitten, Robert M., "A Study of Signal Systems and Methods and Techniques of Meeting Defensive Changes on the Field of Play in Football." Master's thesis, UNC.

Moomaw, Virginia, Labanotated Modern Dance, WCUNC, 1959.

This book is designed to teach modern dance and Labanotation simultaneously. When a student learns to play the piano he learns the symbols of the staff at the same time he learns the piano techniques. And so when a person learns to move he may also learn the Labanotation symbols for each movement. This book is adaptable to various approaches to teaching modern dance and is presently being used on a trial basis in four different schools.

Mosely, Louise, "The Spiritual Role in Camping." M.Ed., WCUNC, 1959.

- N -

Nesbitt, Vanda Whicker, "Homemade Play Apparatus and Equipment." Master's thesis, UNC.

Netcher, Jack R., "Recommended Activities of Public School Nurse Employment by Boards of Education in Indiana." Thesis.

The purpose of this study was to determine the activities of school nurses employed by boards of education in Indiana, as recommended by nurses, superintendents, principals, physicians, and Parent Teachers Association representatives. A list of school nursing activities was recommended based upon the findings.

Newman, Donna, "A Curriculum Study in Physical Education for the Catholic Girls' School in Memphis, Tennessee." M.Ed., WCUNC, 1958.

Nisle, Virginia, "A Study to Determine the Effects of the Order of Presentation on the Learning of Beginners in Duck Pin and Ten Pin Bowling." M.Ed., WCUNC, 1956.

One group was instructed in ten pin bowling for the first sixteen lessons and changed to duck pin bowling for the last sixteen lessons. The other group followed the reverse procedure. No significant differences was apparent.

- O -

Ogilvie, Sally Ann, "The Status of Non-Major Programs in Physical Education for College Women in the Eastern and Southern Districts of the United States." M.Ed., WCUNC, 1954.

Olson, Mildred, "Vacillatin' Minds" (Labanotated) to the music "Suite Francaise pour Piano" by Francis Pauleno and "Midnight Miasma" (Labanotated) to the music "Bugles and Birds: A Portrait of Pablo Picasso" by Virgil Thompson. M.F.A., WCUNC, 1952.

O'Neill, Marion, "A History of the Physical Education Department at the Woman's College of the University of North Carolina." M.Ed., WCUNC, 1956.

The development of the department is traced from 1892 through 1954. The history of the college, program, philosophy, costumes, facilities, and extracurricular activities are the areas covered. The text is supplemented by photographs.

- P -

Parker, Yvonne, "Little Man - Kinetic Abstraction" (Labanotated) to the music "Three Piano Pieces" by Alan Hovhaness and "The Love Of Movement" (Labanotated) to the music "Soundings for Trumpet, Bassoon and Percussion" by Richard Donovan. M.F.A., WCUNC, 1958.

Parrish, Eva Ruth, "A Study of the Anatomical and Kinesiological Principles Underlying the Activities of Reaching, Lifting, Carrying, Climbing, Pushing and Pulling as Applied to Household Activities." Master's thesis, UNC.

Patton, Marilyn, "Time for Decis;on" (Labanotated) to the music "Symphonic Sketches" by George Chadwick. M.F.A., WCUNC, 1959.

Peacock, William H., "A Study of Monogram Winners at the University of North Carolina 1935-36 to 1950-51." UNC.

(With James E. Vawter) "Games Activities of the Southeastern Indians of the United States."

\_\_\_\_\_, "Gross Motor Skills of Mentally Retarded Children Ages Seven Through Fifteen." UNC, 1959.

Data have been collected on an eight item motor ability test for 600 mentally retarded children (IQ 50-80) and 3,000 normal children with same age range. Tests of significance have been calculated for comparisons between the means for the retarded and normals for each of the test items. McCall "T" scores have also been calculated for the data concerned with normal children.

\_\_\_\_\_, "Sport Skill Tests and Achievement Scales for Boys in North Carolina Secondary School." UNC.

A pamphlet published by the North Carolina Department of Public Instruction.

Perry, Gales Pickard, "A Study of Intramural Participation at the University of North Carolina on the Basis of General Athletic Ability." Master's thesis, UNC.

Plant, Wilfred Thomas, "A Validation of the Cozen's General Athletic Ability Test for College Men as Administered at the University of North Carolina During 1945-50." Master's thesis, UNC.

Porter, Nancy Ann, "A Study to Determine the Effects of a Course in Basic Activities on the General Motor Ability of College Freshmen Women of Low Motor Ability." M.Ed., WCUNC, 1956.

This proposed course in basic motor skills is one attempt to meet a common need of these unskilled people by providing instruction and experiences in the fundamental motor skills. By the homogeneous grouping of low motor ability students, the instruction can be geared to meet this demonstrated need for developing general motor skills, as well as to develop an appreciation of the desirable values of physical activities as a means to satisfaction and enjoyment.

Prescott, Evelyn D., "A Survey of Girls' Athletic Associations in the United States." Master's thesis, UNC.

Proctor, Catherine, "Attitudes of the 1952 and 1955 Duke University Women Alumnae Previously Enrolled in Physical Education." Duke University, 1959.

The purpose of this study was to evaluate, through the survey method of research, the physical education program at Duke University Woman's College in respect to (1) factors which cause and have caused both positive and negative feelings or attitudes toward physical education; (2) skills learned in physical education classes which have been and are benefitting the graduates; and (3) suggestions and comments for the existing program.

- R -

Raby, Betty Brown, "The Utilization of Leisure Time by the Graduates of the Woman's College, Classes of 1945 and 1949." M.Ed., WCUNC, 1953.

The purpose of this study was to determine how leisure time was being utilized by graduates of the Woman's College and what bearing physical education activities participated in, as students, might have upon leisure interests. It was also a purpose to discover whether activities learned in college had been utilized for purposes other than leisure.

Ribet, Emily Catherine, "Teaching Techniques Used With Fear Cases in Beginning Swimming for College Women." M.Ed., WCUNC, 1957.

Twelve college students, who were afraid of the water, voluntarily participated in a special class to determine satisfactory teaching techniques for this special group. The progress of these students was recorded in case study form.

Roby, Shirley, "Depot" (Labanotated) to the music "Variations on a Theme by Frank Bridge" by Benjamin Britten. M.F.A., WCUNC, 1958.

Rogers, Kitty, "A Comparison of Personality Traits of College Women Physical Education Majors Who Were Successful With Those Who Were Less Successful in Student Teaching." M.S., WCUNC, 1959.

Rogers, Millicent, "Visions and Revisions" (Labanotated) to the Music "Sirenes" by Claude Debussy. M.F.A., WCUNC, 1955.

The impetus for the dance idea was "Renascence" by Edna St. Vincent Millay. The dance is performed by a solo figure who has perceived the beauty of good (a group) and is over come almost through trickery by evil (a group). She then realizes that life is a continuous decision of what is good and what is evil. The final decision is left to the audience.

Rotha, Charline, "A Program of Physical Education for Deaf Children Based on Selected Factors." Master's thesis, UNC.

- S -

Saltzsieder, Barbara Ann, "A Two-Year Camp Counselor Training Course for Girls in Private Camps." M.Ed., WCUNC, 1954.

On the basis of questionnaire returns concerning desirable camping practices and readings dealing with camping, adolescence, child growth and development, and mental hygiene, a two-year course was developed and standards for its administration were established.

Sanderson, Eleanor B., "Comparison of Physical Fitness of Upper Elementary Age Children Under Agency Care with Those Who Continue to Live in Their Own Homes." M.Ed., WCUNC, 1959.

The physical fitness of two groups of upper elementary age children living in different environmental settings was compared. The Youth Fitness Test Battery was administered to 135 fourth, fifth, and sixth grade boys and girls in the two groups.

Schoellkopf, Herbert J., Jr., "Minor Sports in the North State Conference." Master's thesis, UNC.

Shelton, Teresa, "An Analysis of the Shooting Faults of the Archery Novice with Specific Reference to an Instructional Film." Master's thesis, UNC.

Sherwin, Hilda A., "A Study of the Effect of Camping Experience on the Confidence, Health, Emotional and Social Adjustment of High School Girls in Private Boarding Schools." M.Ed., WCUNC, 1953.

The Bernreuter Personality Inventory and the Bell Adjustment Inventory were given to two groups of high school girls enrolled in private boarding schools. The groups were divided according to previous camping experience. Confidence was the only trait in which a significant difference was evidenced. This difference was in favor of the group with previous camping experience.

Shepard, George E., "Bibliography on Physical Health Needs of Adolescents in Secondary Schools." UNC, 1951.

Shepard, George E. and Richard E. Jamerson, Interscholastic Athletics, New York: McCraw-Hill Book Company, Inc., 1953.

Shields, Dorothy Ann, "Badminton Tests for College Women." M.Ed., WCUNC, 1952.

The purpose of this study was to construct a battery of badminton skill tests to determine badminton playing ability and to be used for diagnostic purposes.

Shute, Shirley, "A Study to Determine the Power of the Independent Movements of Various Swimming Strokes and Their Relation to the Total Power of These Strokes for College Women." M.Ed., WCUNC, 1958.

Sifford, James Potts, Jr., "A Comparative Study of the Academic Achievements of Athletes and Non-Athletes at Albemarle, North Carolina, High School for the Academic Year 1949-1950." Master's thesis, UNC.

Smith, Janie Belle, "A Study of Physical Education Orientation Courses for Freshmen Women with a Suggested Course Outline." M.Ed., WCUNC, 1956.

This planned orientation course is designed as a supplement to the regular core program. The semester course includes plans for general orientation to physical education, body mechanics, fundamental rhythms, relaxation, healthful living, and leisure.

Smith, Jean Minnis, "Threshold" (Labanotated) to the music "Sonata for Two Pianos" by Paul Bowles. M.F.A., WCUNC, 1955.

A young girl beginning to enter adult society is not at first accepted by this group. Her first reaction is to run to the security of her childhood symbolized by the mother. The mother first comforts the daughter and then guides and finally forces her to try the adult world again. The girl is finally accepted and leaves the mother as a member of adult society.

Soares, Patricia, "A Study of the Relationship Between Selected Components of Coordination and the Rate of Learning of Selected Motor Activities for College Women." M.Ed., WCUNC, 1958.

Sood, Vimla, "A Study of the Existing Programs of Physical Education in the Girls' Secondary Schools of Delhi State, India, and in the State of North Carolina, United States of America." M.Ed., WCUNC, 1957.

Five selected schools in North Carolina and five selected schools in Delhi State, India were described in relation to existing backgrounds of philosophy and history.

Spangler, Dorothy Ann, "A Study of the Problem of Participation in the Women's Intramural Program at the University of North Carolina." Master's thesis, UNC.

Sparger, George Washington, III, "A Study of the Relationship of Chronological Age and the Results in Football." Master's thesis, UNC.

Sparks, Jack P., "A Study of the Health Program of the Cabarrus County, North Carolina, Schools with Implications for Functional Health Instruction in Grade Nine." Master's thesis, UNC.

Stevens, Jean Weaver, "A Study of the Factors that Influence Change of Attitude of College Freshmen Women toward Physical Education as an Activity Course." M.Ed., WCUNC, 1953.

This study dealt with all freshmen students at the Woman's College who showed a change in attitude either positively or negatively after one semester of physical education. The questionnaire was used to determine factors influencing attitude. A comparison was made between those showing a positive change and those showing a negative change.

Stevens, Thomas Brock, "A Study of the Fundamentals of Pass Defense in Modern Football." Master's thesis, UNC.

Stevenson, Harold Tabor, "A Study of the Problems Faced by a Physical Education Director in a Small Rural High School in North Carolina." Master's thesis, UNC.

Stewart, Robert Harvey, Jr., "A Study of the American Legion Junior Baseball Program." Master's thesis, UNC.

Stohlman, Yvonne R., "The Status of Elementary School Physical Education in the State of North Carolina." M.Ed., WCUNC, 1953.

The questionnaire technique was used to obtain information concerning facilities and equipment, training of teachers, programs and budgets for elementary school physical education in North Carolina.

Stonemetz, Barbara Jane, "Elementary Campcraft Skills Specifically Applied to Trip Camping." M.Ed., WCUNC, 1956.

This thesis provides a teaching manual and a motion picture to aid the instructor in elementary campcraft skills of camp counselors who would be called upon to assist in the trip program. Topics covered include making a blanket roll, areas of a camp site, a camp site refrigerator, knots and lashing, shelters, jackknives, axemanship, fires, poison ivy, and telling direction.

Stowe, Myra Katherine, "A Survey of Skiing in the Women's Physical Education Departments in New England Colleges and Universities." Master's thesis, UNC.

Straub, Ervin, J., "A Photographic Analysis of Seven Turns Used in Competitive Swimming." Master's thesis, UNC.

Swain, F. Muriel, "A Comparative Study of Two Methods of Teaching the Flutter Kick to Beginning Swimmers." M.Ed., WCUNC, 1956.

A running method and a bracket method of teaching the flutter kick are employed to attain the feeling of the circular motion used in this leg action. Six beginning swimming classes were divided into two groups for this experimental study.

- T -

Taylor, Walter C., Jr., "Effect of High Ambient Temperature, Moderate Exercise, and Several Variables Upon Steadiness." UNC, 1959.

Subjects were tested for steadiness before, during, and after six three-hour trials of alternate thirty-minute exercise and rest periods in a heat chamber equipped with a treadmill. Variables were superhydration, caffeine stimulation, benzedrine stimulation, placebo, and dehydration.

Thomas, Roger, and Eric B. DeGroat, and others, "Pilot Study of Classification Procedures." ASCT, 1959-60.



A study of a number of motor ability tests and their items to try to adapt one, or a composite of a number of items, that may be usable in the above classification. The results of standardized tests, various items, the time consumed, the personnel required, and the materials necessary for running the tests as well as recording the results will be handled by students in Tests and Measurements and Interpretations of Tests and Measurement classes conducted during this winter quarter. The findings will decide the test items and the methods of procedure to be used by the department in the coming fall.

Thompson, Delores Lorain, "The Production of Six Educational Television Programs of Selected Physical Education Activities with Special Reference to the Production of a Closed-Circuit Kinescope." M.Ed., WCUNC, 1957.

Table tennis, recreational games, a party, and speedball were the activities presented in the educational television programs. The production included practices to plot the action, plan the general staging and to check the camera angles and lenses.

Thorpe, Jo Anne Lee, "A Study of Personality Variables Among Successful Women Professional Students and Teachers of Physical Education." M.Ed., WCUNC, 1958.

The Edwards Personal Preference Schedule was used to determine whether or not there was an existing pattern of similarity of personality variables among successful women undergraduate students, graduate students, and teachers of physical education. It was concluded that there tended to be an existing pattern of similarity of personality variables among the two hundred and fifty-five subjects included in this study.

Tiemann, Marianne, "The Construction of Colored Slides to Illustrate Swimming and Floating Formations Used in the Production of Synchronized Swimming Routines. M.Ed., WCUNC, 1957.

These fifty-five colored slides were developed (1) to provide a visual tool for teachers and performers, (2) to provide an aid for developing a clearer concept of choreography, and (3) to provide a tool which would help visualize an interpretation of the use of swimming and floating formations in the production of a routine.

Trosper, Barbara, "Inside Out" (Labanotated) to the music "Sonatina" by Alfredo Casella. M.F.A., WCUNC, 1954.

A would be actress tried out the characters of the Villain, the Comedian, and the Neurotic before her dream audience.

- U -

Ulrich, Celeste, "Measurement of Stress Evidenced by College Women in Situations Involving Competition." Ph.D., University of Southern California, 1957.

\_\_\_\_\_, "The Relationship of Stress to Manifest Anxiety." WCUNC, 1959.

Correlations between eosinophil drop and Taylor's Manifest Anxiety Test showed these relationships. Comparisons were made between individuals experiencing various intensities of basketball.

Umstead, Elizabeth Claire, "State Legislation for Physical Education." Master's thesis, UNC.

- V -

Varney, Harry Eugene, "A Study to Determine the Causes of the Decline of Intercollegiate Boxing." Master's thesis, UNC.

- W -

Wall, Lulu, "Ways of Women" (Labanotated) to the music "Concerto Grosso" by Ernest Bloch. M.F.A., WCUNC, 1957.

Women gradually break away from dependence and seclusion in the home to become nearly the equals of man and his companion.

Walters, Lula, "The Construction of a Series of 35 mm. Slides to Aid in the Teaching of Beginning Duck Pin Bowling." M.Ed., WCUNC, 1959.

Walters, Marshall L., "Survey of Sports." ASCT, 1959.

This is an attempt to find just what sports the students have a knowledge of, experience in, and how much of both. This is being given to all students in Physical Education. Majors may be separated to see if there is any correlation between the knowledge of all these different sports and the desire to study Physical Education.

Walters, Marshall L., "Theories of 'Aging' and 'Old Age', an Historical Approach." Doctoral dissertation in process.

The basic philosophical and scientific concepts relating to the 'aging' process and to 'old age' that have been held by man from the beginning of historical recording to the present day.

West, Charlotte, "A Comparative Study Between Height and Wall Volley Tests Scores As Related to Volleyball Playing Ability of Girls and Women. M.Ed., WCUNC, 1957.

The two hundred and twenty subjects used for this study were chosen to cover a wide range of age, height, skill and experience in the game of volleyball. Two wall volley tests were used and an additional one designed by West which had no restraining line. The West test proved to be both reliable and valid.

Wheeler, Margaret, "An Investigation of Liability and Accident Insurance Plans for the Athletic Federation of College Women." M.Ed., WCUNC, 1954.

Group accident insurance plans for W.A.A.'s and W.R.A.'s which would provide a safe situation for athletic activities and adequate protection for students and faculty advisers were investigated. This study was undertaken upon the request and with the sanction of the Athletic Federation of College Women.

Williams, Carole C., "A Study of Camp Counselor Positions in Private Camps for Girls." Master's thesis, UNC.

Woodall, Ann Wescott, "The Construction and Standardization of a Cardiovascular Test for Girls." M.Ed., WCUNC, 1959.

The exercise for the test was performed on a running device which recorded the number of steps and regulated the height of the step. One hundred college girls were tested on the Running Board and their performance was compared with their performance on three recognized cardiovascular tests - Foster's Physical Efficiency Test, Schneider's Rating of Cardiovascular Condition, and Tuttle's Pulse-Ratio.

Woods, Marcella, "The Effects of an Endurance Swimming Program on Physical Fitness of College Women." M.Ed., WCUNC, 1958.

Woodyard, A. Lorraine, "A Teaching Manual for Recreational Sports." M.Ed., WCUNC, 1955.

Included in the instructional manual are sections on shuffleboard, table tennis, croquet, billiards, aerial darts, boccie, clock golf, box hockey, deck tennis, paddle tennis, horseshoes, tetherball, pateka, skating, and quoits. Each section contains a brief history, number of players, equipment, court specifications, the object of the game, terminology and playing regulations.

Woodward, Elizabeth Anne, "A Study of the Services of National Sports Organizations." Master's thesis, UNC.

Wyatt, Carl, "A Study and Comparison of the Determined Basketball Skill Level of Varsity and Junior Varsity Team Members and Twenty-five Non-physical Education Major Males in a College Activity Course Using the Knox Basketball Ability Test." ASTC, 1959.

Wyrick, Waneen, "A Comparison of the Effectiveness of Teaching Beginning Fencing to College Women in Relation to Ultimate Skill and Knowledge Achievement and Bout Performance." M.Ed., WCUNC, 1958.

- Y -

Young, Jo Anne, "The Construction of a Recruitment Motion Picture for Physical Education at the Woman's College of the University of North Carolina." M.Ed., 1955.

The fifteen minute color film and accompanying scenario are planned and produced including photographic data for the motion picture.